

A Concept Model For A Standard Computer-based Oral Health Record

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standardization of the Computer-based Oral Health Record

The heritage of the computer-based patient record (CPR) draws upon decades of experience with patient information on physical media. Likewise, the structure and content of dental records evolved from efforts to document services and to organize and retrieve data for decision making. Early in this century, patient information was organized and employed according to the needs of individual practitioners. There were no service documentation standards nor those for content and format for records in the major health disciplines. A major advance was the problem-oriented methodology and its documentation in the form of the Problem-oriented Dental Record. The increasing emphasis on managing patient health rather than health problems requires moving beyond a problem orientation to that documentation required to support *health* decisions.

Several years ago, the American Dental Association (ADA) established an informatics section within its ANSI Accredited Standards Committee MD156. The Association then formalized its Computer-based Oral Health Record (COHR) standardization program through several special working groups. These working groups deal with systems and data standardization issues in dental informatics. The ADA thus has impaneled a continuum of expertise from clinical services and business functions to informatics technologists.

Association guidance was to create a COHR which is technology-independent for

easily retrofit into existing dental systems and broadly functional to support current and future practice modalities. Therefore, a fact-based COHR concept model which describes its functions, data and business rules was prepared using the ICAM Definition (IDEF) methodology, an industry standard information engineering toolset. This IDEF-1X data model was prepared in several small, interdependent views which approximate the core functions of clinical processes. This data model is the product of the Computer-based Oral Health Record workgroup constituted by the Council on Dental Practice (CDP) and drew upon work accomplished by the Dental Services of the Defense Health Program. This model is completely independent of technology and considerations of database type.

Data domains for the concept model are being prepared by the Association's Advisory Committee on Dental Electronic Nomenclature, Indexing and Classification (ACODENIC). Revision to the concept model is accomplished through joint activity between the CDP and ACODENIC workgroups. This work completes the concept model and provides standardized data for COHR reference tables. The concept model is then passed to the ASC MD156 Working Group on the COHR where technical details such as field type and length are incorporated. With publication of this work, the concept model becomes a COHR logical model, and its specifications become the Association standard for content and structure of the COHR.